

Name(s) of Risk Team Members: R. Karol, A. Etkin, A. Warkentien, P. Cirnigliaro, J. Benante, L. Snyderstrup			Point Value → Parameter ↓	1	2	3	4	5					
Area/Facility Description Title: Collider-Accelerator Department			Occupancy or Use (A)	≤once/year	≤once/month	≤once/week	≤once/shift	>once/shift					
Area/Facility # (if applicable): Facility-Wide FRA 4-06													
Area/Facility Description: Facility-Wide ODH			Severity (B)	First Aid Only	Medical Treatment	Lost Time	Partial Disability	Death or Permanent Disability					
			Likelihood (C)	Extremely Unlikely	Unlikely	Possible	Probable	Multiple					
Approved by: <i>E. Lessard</i> Date: 1/15/06 Rev.#: 0													
Reason for Revision (if applicable): Annual review						Comments:							
				Risk with Controls in Place				Risk with Additional Controls in Place					
Physical Item or Activity	Hazard(s)	Control(s)	Occupancy A	Severity B	Likelihood C	Risk* AxBxC	Control(s) Added to Reduce Risk		Occupancy A	Severity B	Likelihood C	Risk* AxBxC	% Risk Reduction
Cryogenic fluids and systems	Oxygen deficiency	ODH analyses, ODH controls, ODH system testing and calibration program, ASSRC reviews, ESRC reviews, training, postings, interlocked emergency exhaust fans, PPE, remote/local audible/visible alarms, emergency response, EMTs, work planning, procedures, POMs, medical clearance, escape pack, MSDS, LOTO, postings, Cryo-system designs to consensus codes, inspections, relief valve testing	5	5	2	50	See note below						
Gasses	Oxygen deficiency, toxic/flammable gas	ODH analyses, ODH controls, training, ASSRC reviews, ESRC reviews, interlocked emergency exhaust fans, remote/local audible/visible alarms, emergency response, EMTs, work planning, POMs, medical clearance, escape pack, MSDS, LOTO, postings, designs to consensus codes, flammable gas alarms, cylinder storage controls, cylinder labels, gas volume limits, inspections, cylinder hydrostatic testing	5	5	2	50	See note below						
Fire extinguishing agents	Oxygen deficiency	Posting, emergency response, EMTs, LOTO, training, L18A CO2 bypass, use of Halon and Inergen	3	5	2	30							
Confined spaces	Oxygen deficiency, toxic/flammable gas	Training, atmospheric testing before entry and periodically, entry procedures, Permits, work planning, LOTO, respirators, forced ventilation, personnel rescue equipment, emergency planning and response, EMTs	2	5	2	20							
Further Description of Controls Added to Reduce Risk: ASSRC has reviewed the controls for ODH safety during working on open RHIC magnets with nitrogen purging. See ATS #2838.													
*Risk:	0 to 20	21 to 40	41-60		61 to 80		81 or greater						
	Negligible	Acceptable	Moderate		Substantial		Intolerable						